

03 Jun 02

DEPARTMENT OF THE AIR FORCE  
Air and Space Basic Course (AETC)  
Maxwell Air Force Base, Alabama 36112

LESSON PLAN

**A1310, AIR AND SPACE SUPERIORITY**

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**RECORD OF CHANGES**

CHANGE NUMBER	REMARKS
New Lesson Plan	Supercedes ABC lesson A1310 dated 27 Aug 01

**SUMMARY OF CHANGES**



## **EDUCATIONAL GOALS**

A1000 Area Objective: Apply aerospace power capabilities and officership principles to warfighting.

A1300 Phase Objective: Comprehend how the Air Force Core Competencies enhance warfighting.

### **A1310 - AIR AND SPACE SUPERIORITY**

**Lesson Objective 1:** Know the historical development of the USAF Core Competency of Air and Space Superiority.

#### **Samples of Behavior:**

(R/S) 1.1 - Identify historical examples of air and space superiority.

(R/S) 1.2 - Define the USAF Core Competency of Air and Space Superiority.

**Lesson Objective 2:** Comprehend the significance of selected historical events in the development of the USAF Core Competency of Air and Space Superiority.

#### **Samples of Behavior:**

(R/S) 2.1 - Explain the significance of the St. Mihiel Offensive of World War I in the development of the USAF Core Competency of Air and Space Superiority.

(R/S) 2.2 - Explain the significance of Operation POINTBLANK in the development of the USAF Core Competency of Air and Space Superiority.

**Lesson Objective 3:** Comprehend how the USAF Core Competency of Air and Space Superiority contributes to aerospace operations.

**Sample of Behavior:**

(R/S) 3.1 - Explain the role of the USAF Core Competency of Air and Space Superiority in the application of aerospace power.

**Lesson Description:** In this lesson, students discuss the importance of Air and Space Superiority as one of the six Air Force Core Competencies. Students also discuss Air and Space Superiority from two historical perspectives: the St. Mihiel Offensive of World War I and Operation POINTBLANK in WWII. This lesson explores the impact of Air and Space Superiority on aerospace operations and how this Core Competency relates to the Airman's perspective of military operations.

**Prerequisites:** None

**Preparation:** Read A1310, Air and Space Superiority.  
Read AFDD 1, pp. 29-30.

**Optional:** N/A

**Rationale/Linkage:** The A1300 Phase of instruction focuses on the Air Force Core Competencies. According to AFDD 1, "Core competencies are at the heart of the Air Force's strategic perspective and thereby at the heart of the Service's contribution to our nation's total military capabilities. . . whether as a single Service or in conjunction with the core competencies of other Services in joint operations" (27). An understanding of the Air Force Core Competencies is required before a study of Joint Air Operations Planning (A1600 Phase) can commence. This particular lesson gives students a thorough understanding of Air and Space Superiority, which is one of the six Air Force Core Competencies.

## INSTRUCTIONAL PLAN

1. **TITLE AND LENGTH OF SEMINAR:** Air and Space Superiority (1:00)
2. **RELATION TO OTHER INSTRUCTION:** The A1300 Phase of instruction focuses on the Air Force Core Competencies. According to AFDD 1, “Core competencies are at the heart of the Air Force’s strategic perspective and thereby at the heart of the Service’s contribution to our nation’s total military capabilities. . . whether as a single Service or in conjunction with the core competencies of other Services in joint operations” (27). An understanding of the Air Force Core Competencies is required before a study of Joint Air Operations Planning (A1600 Phase) can commence. This particular lesson gives students a thorough understanding of Air and Space Superiority, which is one of the six Air Force Core Competencies.
3. **GENERAL METHOD OF INSTRUCTION:**

a. **Presentation Method:** Guided discussion

b. **Time Outline:**

Segment Time	Total Time	Description
0:10	(0:10)	Introduction
0:10	(0:20)	MP I: Air and Space Superiority
0:25	(0:45)	MP II: Historical Examples 1. The St. Mihiel Offensive of World War I 2. Operation POINTBLANK
0:10	(0:55)	MP III: Current and Future Application
0:05	(1:00)	Conclusion

c. **Instructor Preparation:**

- Review the lesson plan.
- Read A1310, Air and Space Superiority.
- Review AFDD 1, pp. 29-30.

d. **Instructional Aids/Handouts:**

- Video Clip: Horner on Air Superiority

**e. Student Preparation:**

- Read A1310, Air and Space Superiority.
- Read AFDD 1, pp. 29-30.

**f. Strategy:** This lesson is a guided discussion. The instructor should get the students' attention by showing what an Air Force leader during wartime thinks about Air and Space Superiority. During the motivation step, describe what it is like to fight without air and space superiority. Stress the uncertainty and confusion your forces have without air and space superiority. Begin with the knowledge-based questions about the USAF core competency of air and space superiority. Use the historical examples to emphasize the key points in the definition of air and space superiority and bring out how the principles of war and the air and space power functions contributed to air superiority in those examples. Next, get the students to discuss air and space superiority as it applies to them, both as ASBC students and as AF officers. Finally, wrap up the lesson by hitting the lesson objectives again and reminding them of the "so what." Core competencies are the basic areas of expertise that the Air Force brings to the fight. Airmen must be able to master these core competencies, if they are to employ aerospace power properly.

**g. References:** N/A

#### 4. DETAILS OF INSTRUCTION:

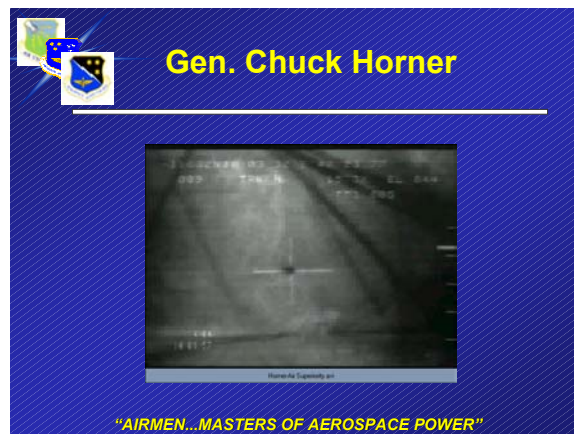
##### a. Introduction: 0:10 (0:10)



1) //Attention//

*{Horner Video Clip (0:00:21)}*

**[SLIDE]** *(Video starts automatically)*



2) //Motivation//

Imagine yourself in a tank. You are dug-in to your defensive position waiting for some unsuspecting enemy to come into your sights. You are ready to kill. Then the hunger pangs hit. You haven't had food for two days and you don't know when the next shipment will arrive. As night approaches, the temperature drops and you begin to shiver. You can't heat your tank because you have to conserve fuel – the attack may come at any moment. It doesn't matter because you won't be sleeping in your tank tonight anyway. You trudge back about 100 yards or so to

the trench you dug last night when the bombs began to fall. They will come again – you have the small scrap of paper that says so. As you drift off to sleep, the drone of jets flying overhead strikes fear into your heart. The paper didn't lie. You haven't slept for three days – and now this. This time they are bombing YOUR unit. The explosions are deafening and ceaseless. You see tanks explode as your comrades dive into their trenches. Some don't make it and are consumed by the fireballs. Hours pass, then the paper starts to fall again. You face the sunrise knowing that the cycle is only beginning again. The paper says they'll be back. You have no choice but to believe.

This is what Iraqi ground forces faced in the days preceding the ground attack in Operation DESERT STORM. These forces either surrendered without a fight or died in the confusion. This level of victory was achieved because we had Air Superiority.

3) //Overview//

**[SLIDE]**



“Air superiority is not a precise concept. And the process of gaining it is no less fuzzy.” (Every Man a Tiger, Gen Chuck Horner and Tom Clancy). Today we will clear up some of the “fuzziness” associated with this concept. First, we will look at air and space superiority from a doctrinal perspective. We will look into how our doctrine defines air and space superiority and the process for attaining it. We will then examine two historical examples to better understand where that doctrine came from. We will also be able to apply the definitions we have just learned to get a better idea of what air and space superiority is. Finally, we will look at our current situation, both as an ASBC flight and as an Air Force, and examine how Air and Space Superiority applies today.

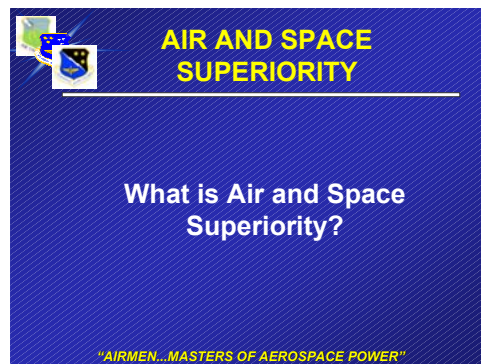


(TRANSITION): LET'S BEGIN EXAMINING THIS CORE COMPETENCY, WHICH GEN HORNER SAID IS A PREREQUISITE TO VICTORY.

**b. MP I: Air and Space Superiority: 0:10 (0:20)**

*{Instructor note: All of the quotations in MP1 are from AFDD 1.}*

**[SLIDE]**



**LEAD OFF QUESTION (LOQ): WHAT IS AIR AND SPACE SUPERIORITY?**

**[SLIDE]**

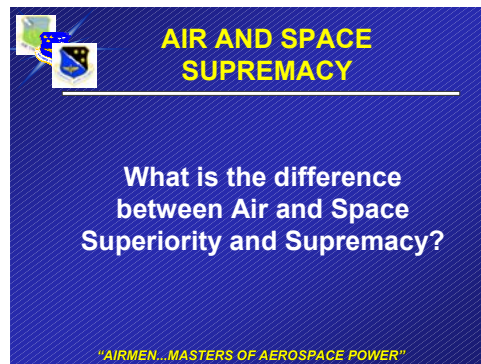


**ANTICIPATED RESPONSE (AR):** Air and space superiority is “that degree of dominance that permits friendly land, sea, and air forces to operate at a given time and place without prohibitive interference by the opposing force.” It is the means by which all other land-, air-, and sea-based military objectives can be met. Therefore, “It is an important first step in military operations.” Space superiority also includes the idea that our military forces should be able to “operate without

being seen, heard, or interfered with from space.” Because of the flexibility of airpower, there is the potential that many demands will be placed on airpower for a variety of tasks, but the proper degree of air and space superiority based on the current situation should always be the highest priority.

*{Instructor note: For instance – If surface forces are not currently engaged, a commander might want to concentrate on achieving a broad level of air superiority/supremacy over the theater, but if surface forces are engaged, the commander might want to achieve only local air superiority over the actual battle in order to effectively protect those surface forces.}*

**[SLIDE]**



### **FOLLOW UP QUESTION (FUQ): WHAT IS THE DIFFERENCE BETWEEN AIR AND SPACE SUPERIORITY AND AIR AND SPACE SUPREMACY?**

**AR:** “Superiority is that degree of dominance that permits friendly air, land and sea forces to operate at a given time and place without prohibitive interference by the opposing force.” Simply stated, this means that I can accomplish my military objective without the enemy making it impossible for me to do so. The enemy may still interfere, but they are not able to prevent accomplishment of the mission. In fact, there may be friendly losses in a situation where air and space superiority has been achieved, but not significant enough to “prohibit,” or prevent friendly forces from meeting their objectives.

**[SLIDE]**



“Supremacy is that degree of superiority wherein opposing air and space forces are incapable of effective interference anywhere in a given theater of operations.” Although this sounds like the most desirable state of operations, air and space supremacy may require too high a price to achieve, in assets required, time required, or both. The principle of economy of force must be used in determining what degree of superiority or supremacy is necessary in a given operation or theater.

## **FUQ: HOW DO WE GAIN AND MAINTAIN AIR AND SPACE SUPERIORITY?**

**[SLIDE]**



**AR:** Air and space power is employed through the air and space power functions. When we think of air and space superiority, the predominant air and space power functions are counterair and counterspace, both offensive and defensive.

“Counterair consists of operations to attain and maintain a desired degree of air superiority...” As you studied in a previous lesson, OCA “consists of operations to

destroy, neutralize, disrupt, or limit enemy air and missile power” at its source when we are ready to attack. “DCA concentrates on defeating the enemy’s offensive plan and on inflicting unacceptable losses...”

“Counterspace involves those operations conducted to maintain a desired degree of space superiority...” OCS operation are intended to “destroy or neutralize an adversary’s space systems or the information they provide” when and where we want to attack. DCS operations are active and passive measures to protect our space assets from destruction or interference.

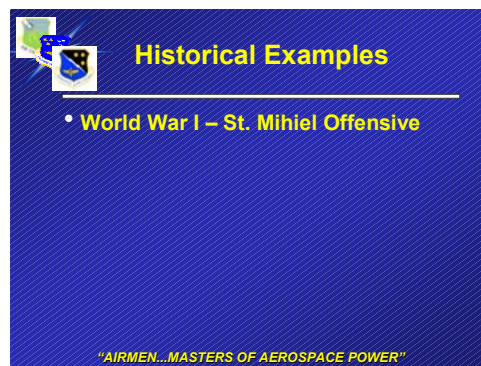
Other functions, such as strategic attack, counterinformation, air refueling, etc. also play important roles in supporting the counterair and counterspace missions.

*{Instructor note: Have the students discuss in more detail how **they** think these other functions could be used in the attainment of air and space superiority. For instance: Airlift will bring munitions to theater, Air refueling will allow the OCA attacks deep into enemy territory as well as extended time on station for DCA CAPs, ISR tells us which targets are most lucrative in achieving air & space superiority, etc.}*

(TRANSITION): NOW THAT WE’VE EXPLORED THE USAF CORE COMPETENCY OF AIR AND SPACE SUPERIORITY, LET’S LOOK AT SOME HISTORICAL EXAMPLES THAT SHAPED THE DEVELOPMENT OF AIR AND SPACE SUPERIORITY.

**c. MP II: Historical Examples: 0:25 (0:45)**

**[SLIDE]**



## The St. Mihiel Offensive of World War I:

### LOQ: WHAT WERE THE AIR OBJECTIVES FOR THE ST. MIHIEL OFFENSIVE?

*[SLIDE]*

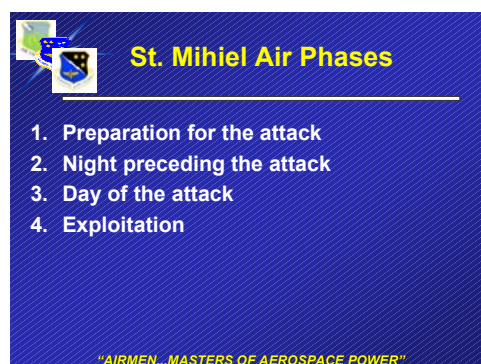


**AR:**

- Provide accurate information for the infantry and adjustment of fire for artillery
- Hold off enemy air forces from interfering with friendly ground or air forces
- Bomb back areas to prevent resupply of forward forces

### FUQ: WHAT WERE THE PHASES USED BY COL MITCHELL TO ACHIEVE THESE OBJECTIVES?

*[SLIDE]*



*{Instructor note: Bullets come up one at a time. Hit the button before each FUQ in order to bring the billet up}*

**AR:**

1. Preparation for the attack
2. Night preceding the attack
3. Day of the attack
4. Exploitation

***[SLIDE] (First bullet)***

**FUQ: HOW DID COL MITCHELL ACHIEVE AIR SUPERIORITY IN THE PREPARATION PHASE AND HOW DID IT SUPPORT THE OBJECTIVES?**

**AR:** Col Mitchell used “barrage patrols” (DCA) over friendly lines to hamper reconnaissance efforts in order to prevent enemy knowledge of the attack and to protect forces massing for the attack. It is important to note that normal patrols flew in the forward areas during this phase. Fighting to gain and maintain air superiority in the forward areas (over the German lines) would have been a waste of resources at this time and, more importantly, would have tipped off the Germans that an attack was imminent. The normal patrols still provided the information necessary for the ground forces to plan (objective 1), while the barrage patrols protected the forces preparing for the battle (objective 2).

***[SLIDE] (Second bullet)***

**FUQ: WHERE DID COL MITCHELL CONCENTRATE HIS AIRPOWER DURING THE NIGHT PRECEDING THE ATTACK, AND WHY?**

**AR:** Since he could not possibly attack all the targets the ground commanders requested, he concentrated on critical targets such as airfields, ammo dumps, railway stations, and enemy cantonments (temporary troop encampments). These targets created the maximum effect possible on the enemy forces. The result was a temporary paralysis that could be exploited as the battle ensued.

***[SLIDE] (Third bullet)***

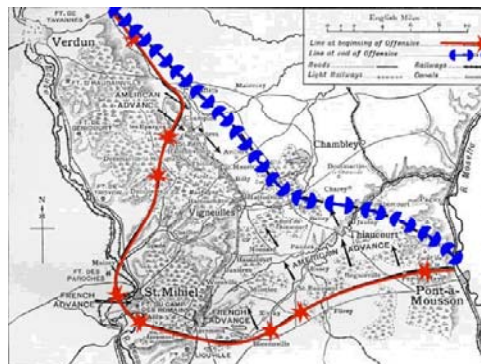
**FUQ: HOW WAS AIR SUPERIORITY GAINED DURING THE INITIAL STAGES OF THE ATTACK?**

**AR:** DCA missions flew over the advancing ground forces and friendly rear areas. OCA missions flew deep into the enemy rear, primarily against airfields. These actions coerced German forces to fly and fight, or risk destruction on the ground. When the Germans did fight in the air, the engagements took place well over German held territory, never approaching the battle lines.

*[SLIDE] (Fourth bullet)*

**FUQ: WHAT WAS THE RESULT OF GAINING AIR SUPERIORITY EARLY IN THE BATTLE?**

*[SLIDE]*



**AR:** Allied aircraft could move to forward operating bases and attack the retreating German army with machine gun strafing and high explosive bombardment. They could also cut avenues of escape as rail stations and bridges were destroyed. The air component contained the enemy army, setting the stage for overwhelming victory.

(TRANSITION): WORLD WAR I SAW THE INTRODUCTION OF THE THIRD DIMENSION TO WARFARE. DURING THE INTER-WAR YEARS, MILITARY THEORISTS REFLECTED ON THIS NEW TECHNOLOGY AND TRIED TO DISCOVER THE BEST WAY OF IMPLEMENTING IT. WHEN WORLD WAR II STARTED, THERE WERE SEVERAL IDEAS ABOUT THE IMPLEMENTATION OF AIRPOWER, BUT IT WAS NOT UNTIL 1943 THAT THE ALLIES CAME UPON A SUCCESSFUL.

**[SLIDE]**



### **Operation POINTBLANK:**

**LOQ: BEFORE 1943, HOW DID UNITED STATES ARMY AIR FORCES (USAAF) COMMANDERS BELIEVE THEY WOULD GAIN AND MAINTAIN AIR SUPERIORITY?**

**AR:** USAAF commanders believed that a fleet of self-defending bombers, flying at high altitude, could penetrate enemy defenses. From that point, they thought they could use precision bombing to destroy “strategic” targets and affect the enemy’s war fighting capability. Douhet, the Italian inter-war airpower theorist, believed these “strategic” targets included civilian population centers (bomb the civilians and they will pressure their leaders for a speedy end to the war). Billy Mitchell believed that more effort should be placed on capability rather than national will. He advocated the bombing of factories, refineries, and production facilities. In either case, it was assumed that the bomber would get through enemy defenses.

**[SLIDE]**





## FUQ: WHAT CHANGED IN 1943 AND WHY?

**AR:** Eighth Air Force was facing prohibitive losses to enemy fighters and anti-aircraft artillery. They could not sustain 11 percent losses, especially since they were not destroying targets as efficiently as they had hoped. The USAAF learned that it was much more difficult bombing targets through smoke, flak, and enemy fighters than on the practice ranges they were accustomed to. British nighttime bombing had proven to be destructive, but ineffective at harming the German industrial capacity. In 1943, Allied plans for a land invasion hinged on gaining and maintaining air superiority. The Combined Bomber Offensive (a.k.a. Operation POINTBLANK) was the method by which this would be achieved. Planners for this offensive placed German fighter strength at the top of the target list in a category all to its own. It was the right direction, but Gen Eaker, commander of Eighth AF, still believed in the power of high-altitude precision bombing by unescorted, self-defending bomber formations. Rather than change his strategy, he merely changed his target set. The result was some of the biggest bomber losses of the war at raids on Regensburg, Schweinfurt, and Stuttgart.

*[SLIDE]*



## FUQ: HOW WAS AIR SUPERIORITY FINALLY ACHIEVED?

**AR:** In Jan 1944, Gen Jimmy Doolittle took command of Eighth AF. Gen Doolittle was a fighter advocate and was well aware of the advancements being made in fighter technology and tactics. He began to employ fighter escorts for the bombers with outstanding results. As their proficiency increased, the fighters performed sweeps ahead of bomber formations as well, which better protected the formations. This protection allowed the bombers to hit their targets more effectively and thereby reduced the German aviation industry's overall capacity. A secondary effect was that the more experienced pilots were now being

killed at an unsustainable rate in Germany, forcing the Luftwaffe to fly inexperienced pilots against the Allies' best. This, as it turned out, was another key factor in gaining and maintaining air superiority.

(TRANSITION): WE'VE LOOKED AT THE DEVELOPING IDEAS OF AIR SUPERIORITY FROM AIRPOWER'S HISTORY. NOW IT IS TIME TO DISCUSS AIR AND SPACE SUPERIORITY AS IT APPLIES TODAY AND IN THE FUTURE.

**d. MP III: Current and Future Application: 0:10 (0:55)**

**[SLIDE]**



**LOQ: HOW DID YOU SEE AIR AND SPACE SUPERIORITY APPLIED IN AFEX?**

**AR:** *{Instructor note: This should be an open discussion using ideas that came from the flight's AFEX experience. Here are some general ideas the students might discuss. Did they use fighter sweeps (OCA)? Did they use SEAD support for their packages? Did they think about air superiority in their planning? Did they achieve air superiority? Supremacy? How did it affect the outcome if they did/didn't?}*

**FUQ: HOW DO YOU THINK AIR AND SPACE SUPERIORITY WILL BE USED IN AIRGAP?**

**AR:** *{Instructor note: Since this exercise is a future event, the discussion will probably be a little less detailed than the discussion on AFEX, but the students should be able to relate the general idea of using OCA/DCA and OCS/DCS within the parameters of the exercise.}*

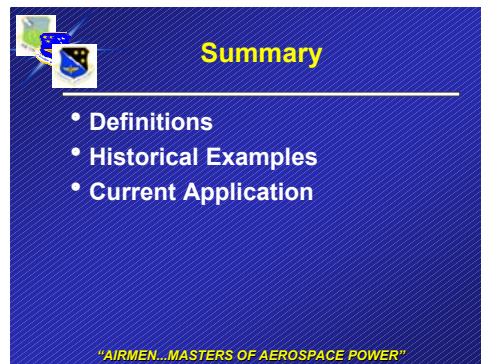
## FUQ: HOW DO YOU THINK YOU WILL CONTRIBUTE TO AIR AND SPACE SUPERIORITY IN YOUR AF JOB?

**AR:** *{Instructor note: Generally, students should be able to relate how they contribute to gaining and maintaining air and space superiority within their career fields and/or how gaining and maintaining air and space superiority is required for them to perform their job successfully. For example: Services provides the meals that keep the pilots healthy enough to fly, or CE can't fix living facilities if they are constantly rebuilding runways.}*

### e. Conclusion: 0:05 (1:00)

#### 1) //Summary//

**[SLIDE]**



This lesson was your first step towards understanding the Air Force Core Competencies. We began by talking about and defining the core competency of air and space superiority, differentiating between air superiority and air supremacy. We then discussed the success achieved at St. Mihiel due to Billy Mitchell's efforts in the air. Next, we saw how 8<sup>th</sup> AF used airpower through WWII and the changes it made after Operation POINTBLANK began which led to achieving air superiority in Europe. Finally, we examined how air and space superiority affects you, both as an ASBC student and an Air Force officer.

#### 2) //Remotivation//

Core competencies describe what the Air Force brings to the fight. Your comprehension of air and space superiority and the other core competencies will be

essential to your success in the AFEX and AIRGAP wargames. It is also essential that you understand the core competencies for the execution of Blue Thunder II.

### 3) //Closure//

As Gen Horner said in the clip at the beginning of this lesson, “If you don’t control the air, you better not go to war.” The Iraqis learned that in Operation DESERT STORM. Let us remember this lesson in every war we have to fight.